

REMARKS

Claims 9, 11 and 13-18 are pending in this application. Claims 13-16 stand withdrawn. By this Amendment, claim 9 is amended for improved clarity. Support for claim 9 can be found at page 16, line 20 to page 17 line 7 of the specification (labeled Example 1). No new matter is added.

I. Double Patenting Rejection

Claims 9, 11 and 12 are rejected for non-statutory obviousness-type double patenting over claims 7 and 9 of copending Application No. 10/531,873. This rejection is respectfully traversed.

Applicants request that this rejection be held in abeyance until this application is otherwise in condition for allowance.

II. §103(a) Rejection

Claims 9, 11, 17 and 18 are rejected under 35 U.S.C. §103(a) over WO 01/16049 to Beall in view of U.S. Patent No. 5,069,697 to Hamaguchi et al. ("Hamaguchi"). This rejection is respectfully traversed.

Claim 9 has been amended for further clarity to recite that "the aggregate particle material is at least one component selected from a group consisting of a mullite, alumina, aluminum titanate, lithium aluminum silicate, silicon carbide, silicon nitride, and metal silicon, and said at least one component is 50% or more of the total mass of the aggregate particle material, where the total mass of the aggregate particle material is 100 parts by mass." Claim 9 also recites that the colloidal particles are added to the clay in an amount of 0.1 to 10 parts by mass with respect to 100 parts by mass of the aggregate particle material.

A. The Definition of Aggregate Particle Material Is Not an Arbitrary Decision

Applicants previously argued that Beall fails to disclose the criticality of the colloidal particles being added as a separate additive, in proportion to the aggregate particle material.

In response, the Advisory Action asserts that "what is defined as the aggregate particle material is an arbitrary classification." The Advisory Action asserts that any subset of the materials in Beall could be defined as the aggregate particle materials. For example, the Advisory Action asserts that if Alumina is used on Beall, the aggregate particle material is only the alumina. As such, the Advisory Action continues to assert that Beall discloses the features of claim 9 and as such "it is not necessary that Beall recognize the advantages found by applicant."

However, the classification of groups of materials has significant importance when secondary materials are added in proportion to specifically identified groups of previously added materials. This can be demonstrated through an analysis of both Beall and Applicant's specifications. As such, the Advisory Action's decision to assign no patentable weight to the specifically recited group of materials that define the aggregate particle materials lacks merit.

For example, as discussed in the July 8 Request for Reconsideration (RFR), Beall discusses the addition of a binder system to the raw materials. Beall discloses that first the "raw materials of which the plasticized mixture is comprised are combined in a mixing step." See Beall, page 9, lines 9-11. Beall then discloses that the "binder system is added at this point" (emphasis added). See Beall, page 9, lines 11-12. Beall discloses that the binder system can be added one component at a time, or can be premixed before being added to the raw materials. See Beall, page 9, lines 26-31. But Beall specifically notes that the raw materials are first mixed separately.

Beall also discloses adding water, binding agents and sodium stearate to the primary mixture of raw materials in proportion to the mass of all of the raw materials. See Beall, page 9, lines 17-21. Specifically, Beall discloses that "assuming 100 parts by weight of the inorganic, alumina and silica forming sources and talc" (emphasis added) about 0.2 to 2 parts

by weight of the sodium stearate, 2.5 to 6.0 parts by weight of the binder and 20-50 parts by weight of water are added.

In other words, Beall discloses that the binder and water must be added in proportion to this specifically identified combination of components. To suggest that Beall places no significance in the choice of what materials are, and are not considered, when calculating the addition of the additives would contradict the plain meaning of Beall's specification. So to, the Advisory Action's suggestion that the choice of the recited aggregate particle materials, and the specific later addition of colloidal particles in proportion to only the aggregate particle materials contradicts what one of ordinary skill in the art would understand in Beall's specification. In particular the Advisory Action's assertion that the alumina itself can be considered 100% of the mass of the aggregate particle material, ignores that the remaining additive materials (in both Beall and claim 9) must be added in proportion to the core materials (whether they be called aggregate particle materials or raw materials). If the wrong set of core materials are defined, the subsidiary additions will be added in improper proportions.

In view of Bealls specific order of material addition and specific discussion of proportionality including the silica forming sources, the Advisory Action's assertions regarding "arbitrary classification" are contrary the state of the art as defined by the applied reference itself. As such, there is a significant difference between Beall and claim 9. Beall discloses using the silica forming sources (the alleged colloidal particles) as part of the collection of raw materials. It specifically, discloses that the water and binding agent, are added in proportion to this raw material. By contrast, claim 9 specifically, and differently, defines the recited aggregate particle materials. Claim 9 further recites mixing and kneading the aggregate particle material, water, an organic binder, and a pore former to form the clay, and then adding the colloidal particles, in a specific proportion to the aggregate particle

materials. In Beall the water and binder must be added in proportion to the combined mass of the alumina and silica forming sources. Yet in claim 9, the colloidal particles are added after the binder and water. Thus, Beall does not disclose or suggest adding colloidal particles to an initial aggregate particle material mix, in a specific proportion.

- B. Beall does not disclose or suggest that the "at least one component is 50% or more of the total mass of the aggregate particle material, where the total mass of the aggregate particle material is 100 parts by mass."

Claim 9 recites "said at least one component is 50% or more of the total mass of the aggregate particle material." The Office Action asserts that Beall discloses this feature at page 9, lines 9-21. See Office Action, page 4, lines 2-4. The July 8 RFR, presented arguments detailing why this assertion lacked merit. In response, the Advisory Action asserts that the choice of aggregate particle material is arbitrary. As such, if Alumina is used on Beall, the aggregate particle material is only the alumina, and is thus 100 parts by mass..


But Beall uses Alumina to form cordierite. See Beall, page 7, lines 4-6. Beall specifically discloses that "the materials should be chosen to give a stoichiometry close to that of cordierite." Thus, Beall constrains the percentage of Alumina in relation to the other components. To suggest that Alumina alone can be designated the aggregate particle material contradicts the specific requirements of Beall. As such, Beall fails to disclose or suggest the at least one component is 50% or more of the total mass of the aggregate particle material.

For at least the above reasons, withdrawal of the rejection of claim 9, and claims 11, 17 and 18 depending therefrom, is respectfully requested.

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of the application are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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Attachments:

Request for Continued Examination
Petition for Extension of Time

Date: August 7, 2009

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